



**National University of
Science and Technology**
Think in Other Terms



**FACULTY OF COMMERCE
DEPARTMENT OF FINANCE
BACHELOR OF COMMERCE HONOURS DEGREE IN FINANCE
PART IV - 1ST SEMESTER FINAL EXAMINATION - JANUARY 2011
INSTITUTIONAL INVESTMENT ANALYSIS [CFI 4103]
TIME ALLOWED: 3 HOURS**

INSTRUCTIONS TO CANDIDATES

1. Answer ANY FOUR questions
2. Start the answer to each full question on a fresh page of the answer sheet.
3. Questions may be written in any order, but must be legibly numbered.
4. Write legibly.

INFORMATION FOR CANDIDATES

The businesses in this question paper are intended to be fictitious

The paper contains SIX (6) questions.

All questions carry equal marks [25 marks]

Question 1

The following information relates to Abitibi Consolidated Plc.

From the income statement ;

Net Sales	\$6.032m
Net Income	\$289m
Net Interest Income	\$470m
Effective income tax rate	29%

From the Balance sheet;

Total assets	\$11,707m (including \$420m and \$379m deferred charges)
Total Liabilities	\$8,442m

From statement of cash flows

Depreciation	\$707m
Non cash expenses	\$91m
Net Investment in working capital	\$50m
Borrowings	\$20

Additional information provided is that the closing share price on 15 April 2010 was \$13.89

Calculate the P/E and P/S (4)

Identify and explain two possible advantages and drawbacks of P/S compared to P/E. (8)

Calculate the Price to Book ratio. (2)

Explain why the price of a share will always be above its Net Asset Value (NAV). If the price of a share happens to be below its NAV, what is likely to happen? (5)

Identify and explain three functions of a secondary market. (6)

Question 2

With aid of a relevant example , explain the Dow theory in technical analysis. (10)

You are given the following information about the JSE.

Day	Number of advancing stocks	number of declining stocks
1	2000	1400
2	1650	1800
3	1500	2100
4	1900	1700
5	2200	1400

Comment on the possible direction of the JSE with aid of relevant calculations. What action will a contrarian take?

(10)

(c) Company XYZ limited recently paid a dividend of 124 cents. The return on equity for the company over the past 10 years has averaged at 30% and it is company policy to retain 20% of distributable income. The beta of XYZ Limited share is 1.2 while the risk free rate of return and the market return are 7% and 16% respectively. Estimate the current share price for XYZ

limited. What would be your action if the actual share price in the market is 1143 cents ?
(5)

Question 3

You are given the following information on four different financial assets.

Asset	Date Purchased	Purchase Price (\$)	Current Price (\$) (30 December 2010)
A	01-06-10	16.5	23.5
B	01-09-10	13	17
C	01-05-10	9	15
D	01-11-10	23	32

Your client needs advice on how to structure his portfolio which should be made up of any of the two assets. Based on information above advise your client.
(10)

You are given the following information regarding prices for a sample of stocks.

Stock	Number of shares	Time t (price)	Time t+1 (price)
A	1,000,000	60	80
B	10,000,000	20	35
C	30,000,000	18	25

Construct a price weighted index for the three stocks and compute the percentage change in the index for the period from t to t+1. (4)

Construct a value weighted index for the three stocks and compute the percentage change in the index for the period from t to t+1. (5)

(c) Identify and explain three major risks associated with investing on the Zimbabwe Stock exchange.

(6)

Question 4

You are given the following information about asset A and B.

Asset	Expected Return	Standard Deviation
A	10%	20%
B	15%	28%

The risk free rate of return is 5% and the correlation coefficient is 0.3.

Estimate the Optimal portfolio made up of A and B. (4)
 With aid of particular key assumptions, show that the efficient frontier will lie within a given region and will be concave. (7)
 Show that the correlation coefficient has more impact on overall portfolio risk than the weight of risky asset. (7)
 Prove that given that the risk of a portfolio is determined by the following equation

$$\sigma_p^2 = w_A^2 \sigma_A^2 + w_B^2 \sigma_B^2 + 2w_A w_B \sigma_A \sigma_B \rho_{AB}$$

Where σ = standard deviation of each asset
 w = weight of each asset
 ρ = correlation coefficient
 then the minimum variance portfolio for assets with equal variance is made up of a 50% investment in asset A. (6)

Question 5

(a)(i) Distinguish between operational and informational efficiency. (3)
 (ii) ‘Operational efficiency of a market is as important as informational efficiency’. Underscore the need for operational efficiency with particular reference to the Zimbabwean market. (10)
 (b) Company A has 2 000 000 issued shares while company B has 6 000 000 issued shares. On day 1, the market values per share are \$2 and \$3 for A and B respectively.
 On day 2, management for company B decide in a private meeting to takeover company A through a cash bid at a price of \$3 per share. The takeover will generate operational savings of \$3.2 million.
 On day 4, company B, publicly announces an unconditional offer to purchase all shares of A at \$3 per share with settlement on day 15. Details of the savings are not announced. On day 10, company B announces the details of savings that will be derived from the takeover.
 Ignoring taxes and time value of money between day 1 and day 15 and also assuming that details given are the only factors affecting share prices of A and B. Determine the day 2, day 4 and day 10 share prices of A and B if the market is ;

Semi-strong form efficient
 Strong form efficient (12)